

## CHAPTER 12

### NAVIGATION

12-1. The Federal Interest. Federal interest in navigation is established by the Commerce Clause of the Constitution, and subsequent court decisions, defining the right to regulate navigation and improvement of the navigable waterways. The navigable waters are important to the nation as a major means of commercial transportation and as a part of national defense. The merits of Civil Works projects for improvement of navigation are currently measured against a single Federal objective--national economic development--in accord with the Water Resources Council's (WRC) Principles and Guidelines (P&G).

a. Project Scope. Navigation improvements are directed and authorized by congressional legislation or other action. Over the years, these actions have circumscribed the scope of improvements to include providing waterway channels, anchorages, turning basins, locks and dams, harbor areas, protective jetties and breakwaters--with adequate dimensions for safe and efficient movement of vessels. Not included are facilities such as docks, terminal and transfer facilities, berthing areas, and local access channels, which have traditionally been the responsibility of local interests.

b. Project Beneficiaries. Federal improvements must be in the general public interest and must be accessible and available to all on equal terms. Although federally-provided general navigation facilities may serve them, improvements are not made to provide navigation access to privately-owned facilities (including commercial marinas) or access to restricted membership yacht clubs and similar establishments not open to the general public on equal terms, nor are improvements undertaken to enhance and primarily benefit land development schemes, waterway cargo transfer and lightering facilities, or to provide barge fleeting areas.

c. Navigation Servitude. The Corps role in navigation is heavily influenced by the common law principle of navigation servitude, essentially the public's right of way to reasonably free use of all streams and water bodies for navigation. Federal concern does not extend, however, to providing unrestricted use of unlimited, obstructionless water areas.

d. Federal Funding. Until passage of the Water Resources Development Act (WRDA) of 1986 (Public Law 99-662), commercial navigation improvements were constructed, operated and maintained by 100 percent Federal funding (except for land and relocations requirements). Such projects authorized by that Act, and subsequently, may involve local cost sharing. Non-Federal cost sharing for recreational navigation projects has always been the norm. (See paragraph 6-4.c)

e. Improvements by Others. There is no general authority available to the Chief of Engineers whereby a grant or contribution of Federal funds can be made for navigation features or navigation benefits of a non-Corps project to be constructed by another agency or by local interests. The Chief of Engineers cannot reimburse, or in any way credit, local interests for their expenditures on navigation improvements which they undertake prior to the approval and adoption of a Corps project, unless specifically authorized by the Congress to

do so (project proposals will not recommend such reimbursement). There are, however, certain general authorities under which local interests may receive reimbursement for work they accomplish on a Corps project after it is authorized (See paragraphs 8-6 and 12-26).

f. Federal Assumption of Operation and Maintenance (O&M). Specific authorization by Congress is required to assume Federal maintenance of channel improvements provided by others which extend beyond the limits of the authorized project. Section 204(f) of WRDA 1986, as amended, as implemented by ER 1165-2-124, provides the basis for the Federal assumption of maintenance of navigation (harbor) projects constructed by non-Federal interests. Section 204(f) generally provides that a non-Federal project must be approved by the Secretary of the Army for Federal assumption of maintenance prior to construction. In view of the provisions of Section 204(f) and in recognition of budget constraints, the Corps of Engineers will no longer seek authorization for Federal maintenance of existing non-Federal navigation projects. Only assumption of maintenance under the provision of Section 204(f) will be considered. This policy does not apply to the study of improvements (deepening or widening) of existing non-Federal projects and recommendations for authorization for construction of these improvements with subsequent Federal maintenance.

12-2. Navigable Waters of the United States. Federal jurisdiction over navigation extends to all navigable waters of the United States (U.S.). The definition of "navigable waters of the U.S." is derived from a history of judicial decisions and interpretations, along with administrative determinations of the Corps and legislative actions which may declare certain specific waters to be non-navigable (33 U.S.C., Chapter I). The Corps defines navigable waters as "...those waters that are subject to the ebb and flow of the tide and/or are presently used, or have been used in the past, or may be susceptible for use to transport interstate or foreign commerce. Corps jurisdiction is limited to lands below the ordinary high water mark in non-tidal waters and land below the mean high tide line in tidal waters. In non-tidal waters the extent of this jurisdiction is also limited horizontally to the bed and bank of the navigable stream. A determination of navigability, once made, applies laterally over the entire surface of the waterbody, and is not extinguished by later actions or events which impede or destroy navigable capacity." (33 CFR 329) The jurisdictional limits of Corps interest with respect to navigation and with respect to other Corps regulatory responsibilities are not consistent. (See paragraph 22-4)

12-3. National Economic Development (NED) Benefit Evaluation, Navigation. Chapter II of the P&G contains NED benefit evaluation procedures for specific types of projects. The relevant procedures for navigation projects are: Section VI, Inland Navigation; Section VII, Deep-Draft Navigation; Section VIII, Recreation; and, Section IX, Commercial Fishing. The economic principles, legislation, and policies to be considered in all navigation studies are summarized below.

a. Priority Outputs. In considering funding for studies and project implementation, commercial navigation benefits are a priority output, while recreation navigation benefits are not. By Act of 10 February 1932 (47 Stat. 42, 33 U.S.C. 541), Congress expanded the definition of waterborne commerce to "include the use of waterways by

seasonal passenger craft, yachts, house boats, fishing boats, motor boats and other similar watercraft, whether or not operated for hire." However, "waterborne commerce" is not exactly the same thing as "commercial navigation" for priority output purposes.

b. NED Benefits. NED benefits are expressed in monetary units. The conceptual basis for determining those values is willingness to pay. Generally the costs of and return from commercial activities are readily quantifiable. The benefits of commercial navigation projects are (1) reduced cost of transportation through use of vessels (modal shift), safer or more efficient operation of vessels and use of larger and more efficient vessels (channel or lock improvements), and use of new or alternate vessel routes (new channels or port shift); (2) reduced cost or increased net return to producers from new sources or markets (shift of origin or destination); and (3) increased production through new or induced commodity movements (industrial production) or greater production opportunity (commercial fishing and offshore minerals). The benefits of recreation navigation projects are reduced cost of recreation (usually delay cost or boat damage cost avoided) and willingness to pay for recreation experiences.

c. NED Costs. The requirement is to identify all costs, with and without the considered navigation improvements. The facilities to accommodate and service vessels or load and unload cargo or passengers usually required to achieve the navigation benefits are a non-Federal responsibility. Their cost is an associated cost that must be accounted for in the evaluation. The preferred accounting is as an NED cost. Associated costs may be handled by the self-liquidating cost concept. That is, facility costs are assumed liquidated by user charges. The concept may be used only if estimated benefits are net of the associated costs. Associated costs must always be shown. Pursuant to WRDA 1986, Federal user charges will be assessed for use of certain waterways (fuel tax) and harbors (harbor maintenance tax), and project sponsors may assess local user fees to recover their cost share. These fees do not reduce the NED cost of the project.

d. Economic Justification. Economic justification is determined by comparison of NED benefits and costs. In addition to NED, the P&G specifies three other accounts for evaluating effects, one of which, regional economic development (RED), is also measured in economic terms. Some or all benefits specific to a region may be at the expense of other regions, and these are recognized as transfers. Such transfers result in no additional benefits contributory to project justification from a national (NED) perspective.

e. Net NED Benefits. Reports should include information and data for a number of alternative plans and plan scales sufficient to satisfactorily define both the upper and lower portions of the net benefits curve. So that the relationship between costs and benefits is evident, either the total benefits and total cost curves or the incremental benefits and incremental cost curves, shall be displayed. The relationship between costs and benefits thus determined and displayed serves as the basis for comparisons of the efficiencies of various plans, including the locally preferred plan if it differs from the Federally supportable plan (NED plan or granted exception to the NED plan).

f. Sensitivity and Risk Analyses. The P&G contain a general

requirement to analyze risk and uncertainty (Chapter I) and specify certain sensitivity analyses for inland and deep-draft navigation (Chapter II). The general requirement is to identify all assumptions, predicted variables, estimated values, and parameter values which are critical to the report recommendation, and the value of each critical factor where the recommendation would change or feasibility would be questioned. The specific analyses which are or may be required address assumptions as to traffic projections, rates or vessel operating costs, and vessel fleet composition or characteristics. Waterway studies are also required to address modal shift, alternate discount rates, and cost recovery fees. Whenever benefits are dependent on the size and life of a resource, as in commercial fishing, sensitivity analyses may be needed.

g. System Analysis. Systems analysis is required in almost all navigation studies. The P&G emphasizes systems considerations and requires evaluation of all reasonable alternatives. P&G procedures specifically require system analysis for inland waterways, and the requirement is implicit in the deep-draft requirement for multiport analysis.

h. Identification of Alternatives. The P&G have a general requirement that all studies formulate and evaluate alternative improvement plans; the aim is to provide a basis for determining the completeness, effectiveness, acceptability, and especially the efficiency of the recommended plan.

12-4. Priority Outputs, Cost Sharing, and Certain Kinds of Fishing Activities. Certain types of fishing have been legislatively or administratively defined as commercial fishing for project cost sharing purposes. These may or may not be commercial navigation for priority output purposes. These special cases are as follows:

a. Charter Fishing Craft, Head Boats, and Similar Recreation-Oriented Commercial Activities. Section 119 of the River and Harbor Act of 1970 (Public Law 91-611), states, "The Chief of Engineers, for the purpose of determining Federal and non-Federal cost-sharing, relating to proposed construction of small-boat navigation projects, shall consider charter fishing craft as commercial vessels." This Act applies only to cost allocation and cost apportionment and does not involve project formulation or evaluation. Evaluation of charter fishing benefits must be based on change in net income of the operator for commercial navigation benefits to be claimed. This change in net income measure of benefits is appropriate only for existing vessels using harbor facilities. Benefits may be evaluated in accordance with procedures for recreational boats, but such benefits are then recreation benefits. A combination of commercial and recreation benefits may apply if the boat operator's income does not capture all increase in value of the recreation opportunity.

b. Subsistence Fishing. Subsistence fishing is not a high priority output. When allocating costs, subsistence fishing is placed in the commercial fishing category, however. Subsistence fishing is defined as fishing activity carried out by those at or below the minimum subsistence level to obtain food. The minimum subsistence level is as defined by the Department of Commerce. The appropriate evaluation procedure depends on site-specific conditions. The basic requirement is to identify benefits based on willingness to pay.

Evaluation based on changes in net income is preferable since subsistence fishing is not recreation.

c. Cruise Ships. Section 230 of WRDA 1996 directs the Corps of Engineers to categorize all benefits generated by cruise ships as commercial navigation benefits. Benefits of navigation improvements affecting cruise ships arise from more efficient ship operations and increased tourism or enhanced tourism experience. Prior to WRDA 1996, efficiency improvement was classified as commercial navigation and improved tourism was classified as recreation. Consistent with Section 230 of WRDA 1996, economic benefits generated by cruise ships are to be categorized as commercial navigation benefits for project justification and cost sharing purposes.

12-5. Cost Sharing and Project Cooperation for Navigation. For waterway projects included within the definition of the "Inland Waterway System," all requirements for project development are Federal. Federal participation in other navigation projects, based on the cost sharing provisions of WRDA 1986, as amended, is limited to sharing costs for design and construction of the general navigation features (GNF) consisting of breakwaters and jetties, entrance and primary access channels, turning basins, anchorage areas, structures designed to protect the channel from shoreline erosion, locks, and land-based and aquatic dredged material disposal areas. Non-Federal interests are responsible for and bear all costs for: provision of the necessary lands, easements, rights-of-way, and relocations (LERRs); and, local service facilities (LSF) such as terminal facilities, dredging in berthing areas and interior access channels thereto. They must agree to hold and save the United States free from damages due to project construction and maintenance. For relocations of utilities within the navigation servitude in projects greater than 45 feet (deep draft utility relocations), one-half of the cost of the relocation shall be borne by the utility owner and one-half shall be borne by the non-Federal sponsor. Non-Federal sponsors may also be required to provide at least one public terminal open to the use of all on equal terms and compel the removal of obstructions to the project when they have the authority to compel the removal at owner cost. Additional local cooperation may be required because of special benefits such as land enhancement from placement of dredged material, betterment in bridge changes, and special limited-interest facilities.

a. Studies. The cost sharing provisions of WRDA 1986 require non-Federal participation (50 percent) in the costs for preauthorization feasibility studies, except for studies of waterways included within the definition of the "Inland Waterways System." Studies of waterways not so exempted (because not clearly included in that definition), may be accomplished at 100 percent Federal cost if approved, in each case, by HQUSACE, based on recommendations and rationale submitted by the division commander. In any such instance, the resulting feasibility report, based on the reasons accepted for exempting the study from cost sharing, will recommend inclusion of the waterway in the system subject to fuel tax. For cost shared studies, the non-Federal share is to be paid during the period of study.

b. Preconstruction Engineering and Design (PED). PED is cost shared at the same percentage as applies to construction of the GNF. The Federal Government finances the non-Federal share, with adjustments in funding arrangements for the first year of project construction providing for non-Federal reimbursement.

Table 12-1, Non-Federal Share, Studies, PED

<u>Preconstruction Work</u>	<u>Commercial Navigation</u>	<u>Recreational Navigation</u>	<u>Inland Waterways</u>
Reconnaissance Study	-0-	-0-	-0-
Feasibility Study	50%	50%	-0-
PED	----- (See Construction) -----		

c. Construction, Operation, and Maintenance. Sections 101, 102, and 103 of WRDA 1986, as amended, specify the cost sharing for commercial harbor, inland waterway, and recreational navigation projects, respectively.

(1) Harbors. Section 101, as amended, requires the project sponsor to bear a percentage share of harbor construction costs for project components that are cost-shared (general navigation features, mitigation), that varies according to the range of water depths where the work is done (20 feet or less, greater than 20 feet but not in excess of 45 feet, and greater than 45 feet). This variable cost share is paid during construction. In addition, Section 101 requires the sponsor to pay 10 percent of the construction costs that are cost-shared, on completion of construction or over time with interest, up to 30 years. Credit against this 10 percent contribution is allowed for the value of lands, easements, rights-of-way, relocations, and the non-Federal sponsor share of deep-draft utility relocations.

(2) Waterways. Waterways that are determined to be "inland waterways" for the purpose of Section 102 are exempt from cost sharing, and construction and O&M are 100 percent Federal. Waterways that are not "inland waterways" are cost shared as commercial or recreational harbors depending on project purpose.

(3) Recreation. Section 103 sets fixed percentages for the non-Federal share of construction and O&M costs for recreation projects (50 and 100 percent, respectively). These cost shares apply to recreational navigation projects, and the joint and separable costs allocated to recreation in other navigation projects.

Table 12-2, Non-Federal Share, Construction, Operation and Maintenance

	Commercial Navigation (Cost Assignable to Project Depth:)			Recreatn	Inland
	<u>to 20'</u>	<u>&gt;20' to 45'</u>	<u>&gt;45'</u>	<u>Navigatn</u>	<u>Waterways</u>
	(to 6.10 meters(m))	(>6.10m to 13.72m)	(>13.72m)		
<u>Construction</u>					
GNF, incl Mit.	10%+10% <u>1</u> /	25%+10% <u>1</u> /	50%+10% <u>1</u> /	50%	-0-
Aids to Navigation	-0-	-0-	-0-	-0-	-0-
LSF	100%	100%	100%	100%	-0-
LERR	100%	100%	100%	100%	-0-
<u>Operation and Maintenance</u>					
GNF, incl Mit.	-0-	-0-	50%	100%	-0-
Aids to Navigation	-0-	-0-	-0-	-0-	-0-
LSF	100%	100%	100%	100%	100%

1/ This additional 10% of GNF may be offset by creditable LERR.

#### 12-6. Navigation Project for General Versus Restricted Interest.

Section 2 of the River and Harbor Act of 5 June 1920 provides that the Chief of Engineers in recommending navigation improvements shall make a determination of the general versus the special interest in an improvement, and recommend an appropriate sharing of costs between Federal and non-Federal interests. The cost sharing prescribed by WRDA 1986 will be the basis for such recommendations. The determination of Federal interest requires consideration of the number of properties served by a proposed project and/or project modification and the types of ownerships of such properties.

a. Single-Owner Situations. The Corps will not recommend any Federal cost participation in construction or expansion of a Federal navigation project (or any other type of Federal water resources project) where the improvement would serve (for the foreseeable future) only property owned by a single individual, commercial/business enterprise, corporation, or club or association with restrictive membership requirements. This situation exists when restrictive conditions of any sort afford a single property owner the exclusive present and future enjoyment of the project benefits. A principal example of opportunity for such exclusive enjoyment of benefits would be where one owner controls all the land giving access to the improvement; single land ownership creates the possibility of the owner so structuring and constraining uses thereof that all net benefits of related improvements can be caused to devolve upon and be reserved to the owner. Only economically justified improvements would be recommended as a Federal project, and if the considered improvements are so justified the interest which would be solely benefited should undertake them as a business expense. The Corps may recommend Federal cost participation in the construction and expansion of a Federal water resource development project where the project would serve only property owned publicly by a single state (including the District of Columbia and territories and possessions of the United States), county, municipality, or other duly appointed public entity. Table 12-3 summarizes single-owner situation policy for proceeding for a variety of Federal project purposes and types of improvements. (ER 1165-2-123)

Table 12-3, General Policy for Proceeding with Proposed Projects (1)  
In Single Owner Situations (2)

<u>Federal Project Purpose and Types of Improvement</u>	<u>Ownership of Single Property Served</u>		
	<u>Public(3)</u>	<u>Private</u>	
	<u>Non-Federal</u>	<u>Nonprofit</u>	<u>For Profit</u>
<u>Flood Control</u>			
Structural measures(4)	Yes(5)	No	No
Nonstructural measures(6)	Yes(5)	No(7)	No(7)
<u>Storm Damage</u>	Yes(5)(9)	No	No
<u>Reduction(8)</u>			
<u>Navigation</u>	Yes(10)	Yes(11)	No
<u>Ecosystem Restoration</u>	Yes(12)	N/A	N/A
<u>Emergency Streambank and Shoreline</u>	Yes	Yes(13)	No
<u>Protection (Section 14 Authority)</u>			

- (1a) Equally applicable to separable elements.  
(1b) This table does not list other purposes such as municipal and industrial (M&I) or agricultural (Ag) water supply, hydropower, recreation or environmental enhancement, for which

- single-purpose Corps projects would not be recommended  
single-owner issues could arise in connection with separable  
elements for these purposes in multiple-purpose proposals only  
to the extent that the non-Federal share of assigned costs is  
less than 100 percent and then only in cases where the sponsor  
is not a public entity.
- (1c) Other than for work under the Section 14 authority, as indicated, this table does not relate to Corps emergency activities.
  - (2) Includes such things as trailer parks, apartment houses, and industrial development sites wherein, although many parties may have an interest, the lands involved are owned by an individual, or by a single company, corporation, or partnership. (Land is not considered to have multiple ownership simply because it is titled in a corporation with stockholders.)
  - (3) This table does not apply to Federally-owned property or facilities; Corps costs of improvements to Federally-owned property are entirely (100 percent) reimbursable by the Federal agency that owns the property.
  - (4) Measures which alter the flood regime.
  - (5) Proposed projects for flood control and storm damage reduction that would protect public facilities which are separable portions of larger protection plans must have such separable portions presented separately in budget requests so that they compete for new starts as reconnaissance studies and construction projects.
  - (6) Measures which reduce or avoid flood damages without significantly altering the nature or extent of flooding.
  - (7) Unless part of a larger plan for nonstructural measures (solely or as an element of a combined structural-nonstructural project proposal) which benefits multiple owners collectively.
  - (8) If benefits consist solely of land loss prevention (i.e., no buildings or facilities subject to damage), recommendations for Federal participation will not be made regardless of number of owners.
  - (9) May be recommended where formulated and justified in accordance with policies applicable to hurricane and storm damage reduction.
  - (10) Includes ferry lines that are publicly owned and operated (terminal and vessels).
  - (11) Unless multiple users (beneficiaries) have formed a nonprofit cooperative to minimize facility costs.
  - (12) Such as cases where multiple users (beneficiaries) form a non-profit cooperative to minimize facility costs. Fish and wildlife habitat restoration projects are normally required to be implemented on lands that either are, or become, public (Federal and/or non-Federal) lands.
  - (13) Section 14 projects may protect private nonprofit facilities such as hospitals and schools.

b. Initial Single(Non-Public)- Owner, Later Multiple-Owner Situations. Federal participation may be recommended in a significant increment of improvement for navigation when the improvement would initially serve property owned by a single individual, commercial/business enterprise, corporation, or club or association with restrictive membership requirements but a reasonable prospect exists for the improvement to later serve multiple properties with multiple owners. A significant increment is defined as one involving



major increases in project length, depth, or width.

(1) Basis for Recommendation. The test for reasonable prospect is controlled by factors such as availability, ownership, and suitability of adjacent waterfront land for development and location by other industries and users; availability of land transport and other essential services; the area's economic potential; intent of land owner and/or the potential developer; and the determination that no restrictive conditions exist that would prohibit the proposed improvement from serving/benefiting two or more single-owner properties (and property owners) in the foreseeable future.

(2) Special Cost Sharing. The project will be recommended for development with cost sharing and other local cooperation in accordance with regular requirements (i.e., as specified in WRDA 1986). There shall be a further requirement that, when the project is in service, local interests shall contribute annually, until such time as multiple properties/owners are served by the general navigation facility, 50 percent of the annual charges for interest and amortization of the Federal first cost of the improvement, exclusive of aids to navigation, and 50 percent of operations and maintenance costs solely associated with the improvement. The requirement for annual contributions may end when the Secretary of the Army determines that the improvement is actually serving/benefiting at least two properties that are owned by at least two different owners.

c. Progressive Development. The Federal interest is satisfied and the regular cost sharing requirements apply where the improvement serves/benefits two or more properties having different owners or one publicly-owned property at the outset or if new properties/owners would be served immediately after project completion. A principle of progressive development also applies. Progressive development includes nominal incremental extension "end of the line" situations where part of the improvement is a last project increment serving the last non-public property or property owner. The last property/property owner served may be "at the end" in terms of length, depth, or width, necessitating some project investment in that service alone. This is treated as a multiple-owner situation unless disproportionate incremental investment is required.

12-7. Transfer and Lightering Facilities, Barge Fleeting Areas. Non-Federal interests are responsible for provision of mooring facilities for the convenience of individual users or that are associated with localized operations. Facilities for the purpose of transfer of cargo between vessels and barge fleeting areas are a non-Federal responsibility. The Coast Guard sets regulations for lightering and designates those areas set aside for that purpose. Barge fleeting areas are defined as mooring areas or temporary anchorages used for assembling tows; making barge transfers between tows; transferring supplies; awaiting arrival of additional barges; or serving as a barge holding area. Consideration will be given to providing barge mooring at Federal cost when it can be demonstrated that such facility is required and necessary for safe and efficient use of a Federal navigation project. Examples would be provision of a mooring to permit reshaping a tow for: (a) safe and efficient passage through a navigaton lock; (b) safe passage through congested Federal channel areas; or (c) safer passage crossing exposed waters. The advanced approval of HQUSACE must be obtained before such facilities are recommended at Federal cost.

12-8. Ownership of Lands Created for Port Facilities. Some navigation project proposals include the filling of adjacent lands by placement of the dredged material to provide lands suitable for development of port facilities. Often development of these lands for port use would be necessary to insure that the traffic used to justify the navigation project would occur. It is the policy of the Corps of Engineers that reports that include a proposal to fill lands for development of port facilities shall also incorporate a local cooperation requirement that the local sponsoring agency will retain fee ownership of those lands for the economic life of the project. In addition, local interests shall be required to regulate the use, growth and development of harbor facilities and limit occupancy of the subject created lands area to those industries whose activities are dependent upon water transportation.

12-9. Development of Public Port or Industrial Facilities. Section 108 of Public Law 86-645 authorizes the Secretary of the Army (notwithstanding the provisions of the Federal Property and Administrative Services Act of 1949, as amended, with respect to disposal of surplus property) to convey land which is a part of a water resources development project to a state, or other public body for the purpose of developing or encouraging the development of public port or industrial facilities. Only lands within a navigation project are made available for this purpose. No action is initiated to sell lands for these purposes until interest is indicated by an eligible agency. Lands are sold at the fair market value upon a finding that the development: (1) is in the public interest; (2) will not interfere with the O&M of the project; and (3) will serve the objectives of the project. (ER 405-1-12)

12-10. Aids to Navigation. The installation and maintenance of primary navigation aids (buoys, lights, daymarks, regulatory signs) is the responsibility of the U. S. Coast Guard, Department of Transportation. The Coast Guard regulates all public and private aids to navigation for uniformity and conformity with the "lateral system" of buoyage as described in 33 CFR 60-79 (14 U.S.C. 89).

a. Funding. All costs for aids to navigation associated with Federal navigation projects are borne by the Coast Guard; however, estimated costs are included in calculations to determine project benefit-cost ratios.

b. Dredging Buoys. The Corps is responsible for temporary navigation aids which are required for construction or maintenance operations, such as dredging buoys and certain regulatory signs in the vicinity of locks and dams. All Corps aids to navigation must conform to Coast Guard standards. (ER 1130-2-520)

c. Permit Requirements. The Corps has issued a nationwide general permit for aids to navigation installed by or approved by the Coast Guard (33 CFR 330.5(a)(11)).

12-11. Waterway User Charges.

a. Fuel Tax. Section 202 of the Inland Waterways Revenue Act of 1978 (Public Law 95-502) imposes an excise tax on fuel used by certain commercial cargo vessels using specified inland or intracoastal waterways of the United States. This law was amended 17 November 1986, by Section 1404 of WRDA 1986 (Public Law 99-662),

increasing the tax schedule and adding the Tennessee-Tombigbee Waterway to the original list of taxable waterways. The Inland Waterways Tax applies only to those segments of the inland waterways specified in Section 206 of Public Law 95-502 as amended, and are differentiated from coastal harbors, Great Lakes channels and harbors, and deep-draft segments of certain inland rivers. The fuel tax schedule became effective on 1 October 1980, at which time the tax was 4 cents per gallon increasing to 10 cents per gallon on 1 October 1985 on fuel used in commercial transportation on specified inland waterways. WRDA 1986 established a new schedule:

Before 1990.....	10	cents	per	gallon.
During 1990.....	11	"	"	"
During 1991.....	13	"	"	"
During 1992.....	15	"	"	"
During 1993.....	17	"	"	"
During 1994.....	19	"	"	"
During 1995(and beyond).....	20	"	"	"

The Inland Waterways Fuel Tax does not apply to deep-draft (draft of more than 14 feet) ocean-going vessels; passenger vessels; state or local government vessels used in official business, movements of LASH and SEABEE barges, or recreation craft.

b. Inland Waterways Trust Fund. Section 1405 of WRDA 1986 amended Sections 203 and 204 of Public Law 95-502 which originally established the Inland Waterways Trust Fund (IWTF). Expenditures from the fund may be made available, as provided by appropriation Acts, for making construction and rehabilitation expenditures for navigation on those Inland Waterways described in Section 206 of Public Law 95-502 as amended. It is the policy of the Corps that these projects be cost shared 50 percent from the IWTF. It is the responsibility of the Secretary of the Treasury to manage the trust fund and make money available as authorized by law. The responsibility for administering the Inland Waterways Fuel Tax is with the Internal Revenue Service (IRS). Inquiries from outside the Corps should be referred to the Legislation and Regulations Division, Office of the Chief Counsel, at the Internal Revenue Service, Washington, D.C. 20224.

c. Inland Waterways Users Board. Section 302 of WRDA 1986 established an Inland Waterways Users Board of eleven members, representing both shippers and primary users, to be selected by the Secretary of the Army. The Users Board is to make recommendations to the Secretary regarding construction and rehabilitation priorities and spending levels on the commercial navigational features and components of the inland waterways and inland harbors of the United States. The Users Board report is filed annually with the Secretary and with the Congress, and is to make recommendations for the following fiscal year. The first meeting of the Inland Waterways Users Board was held on 15 July 1987.

d. Tolls. Effective October 1, 1994, tolls for the use of the U.S. portion of the St. Lawrence Seaway were rescinded (Public Law 103-331).

e. Harbor Maintenance Fee (HMF). Section 1401 and 1402 WRDA of 1986 amended Chapter 36 of the Internal Revenue Code of 1954 (relating to certain other excise taxes) and imposed a fee on the use of any port upon which has been made a Federal expenditure for

construction, maintenance, or operation since 1977. Although legislated as a "tax" for enforcement purposes, the HMF is viewed by the Administration as a fee to recover the costs of port and harbor maintenance by the Corps of Engineers. In keeping with this view, the implementing regulations have made "Federal expenditure" synonymous with Corps of Engineer expenditure. The fee went into effect on 1 April 1987, and is administered by the U.S. Customs Service (Department of the Treasury). The fee, 0.04 percent of the value of the commercial cargo loaded or unloaded at a port subject to the fee, was increased to 0.125 percent under Section 11214 of the Omnibus Budget Reconciliation Act of 1990 (Public Law 101-580). The fee is paid by the shipper in the case of exports and domestic ocean cargo, and by the receiver in the case of imports. There are a number of exemptions to the law, mostly pertaining to certain shipments to and from Alaska, Hawaii, and U.S. possessions and the U.S. mainland. The responsibility for administering the regulations is with the U.S. Customs Service. Inquiries from outside the Corps should be referred to the Director, Users Fee Task Force, U.S. Customs Service, 1301 Constitution Avenue N.W., Washington, D.C. 20229. The March 31, 1998 decision by the Supreme Court in U.S. Shoe Corporation vs. The United States, found the HMF unconstitutional as applied to exports. Collection of the ad velorum tax on exports was halted on April 25, 1998 although collections continue on imports and domestic cargo.

f. Harbor Maintenance Trust Fund. Section 1403 of WRDA 1986 established in the U.S. Treasury a trust fund to be known as the Harbor Maintenance Trust Fund consisting of such amounts as may be collected by the Harbor Maintenance Fee, transferred to the trust fund by the St. Lawrence Seaway Development Corporation, or appropriated by Congress. Section 210 of WRDA 1986 authorizes to be appropriated out of the Harbor Maintenance Trust Fund such sums as may be necessary to pay 100 percent of the eligible operations and maintenance costs of the U.S. portion of the Saint Lawrence Seaway, and not more than 100 percent of the eligible O&M costs assigned to commercial navigation of all harbors and inland harbors within the United States. The WRDA 1990 (Public Law 101-640) increased this authorization to 100 percent of the eligible Corps of Engineers expenditures as well. The WRDA 1996 added the costs of construction of dredged material disposal facilities for O&M of Federal navigation projects, the Federal O&M costs of disposal facilities, dredging and disposal costs of contaminated sediments in or affecting the maintenance of Federal channels, and mitigating for the impact of Federal O&M activities as eligible costs for the Harbor Maintenance Trust Fund.

g. Port or Harbor Dues. Section 208 of WRDA 1986 permits non-Federal sponsors of Federal navigation projects to recover the non-Federal sponsor's share of the cost of construction, operation and maintenance, and provisions for emergency response services. The decision to levy dues, as well as establishment of the dues, is the responsibility of the sponsor. There are some requirements and restrictions on the dues that may be levied, and on what vessels are subject to the dues. A process of public participation is required prior to establishment of the schedule of dues. The non-Federal sponsor must submit specific information, including the proposal for collection of dues, to the Secretary of the Army. The Secretary must then transmit the required information for publication in the Federal Register. The role of the Secretary is to assure that the public involvement process allows opportunity for public review and input. The responsibility of the Corps under Section 208 is to assure that

the schedule of dues is established in a manner which allows for public input and comment. Assistance should be provided in meeting the requirements for public involvement as specified in the Section 208 of WRDA 1986 in accordance with the following specific actions:

(1) Review the material submitted by the sponsor in response to Section 208(a)(5) to determine that the required information is provided;

(2) Submit the information for publication in the Federal Register;

(3) Coordinate with the sponsor to assure that the dates of the required public meetings and dates for comments allow the necessary time from the date of publication;

(4) When the material is submitted to the Federal Register, transmit draft letters for the signature of the Assistant Secretary of the Army (Civil Works)(ASA(CW)), providing the same information as a courtesy to the Comptroller General, the Secretary of the Treasury, and the Federal Maritime Commission;

(5) Keep on permanent file a copy of the dues schedule established by the sponsor; and

(6) Forward a copy of the schedule to HQUSACE and to the Secretary of the Army.

h. Definition of Rehabilitation for Inland Waterway Projects. The definition of major rehabilitation relating to inland and intracoastal waterways of the United States is provided in Section 205 of WRDA 1992 and paragraph 11-3.

12-12. Navigation Data. The Navigation Data Center (NDC) located in Alexandria, Virginia is responsible for the Federal water transportation statistical programs including waterborne commerce, domestic vessels, port and waterway facilities, lock characteristics and operations and dredging.

a. Waterborne Commerce Statistics.

(1) NDC's Waterborne Commerce Statistics Center in New Orleans, Louisiana collects waterborne commerce--passenger, tonnage and vessel data--from domestic vessel operating companies engaged in commercial waterborne commerce activity (33 CFR Part 207 and 33 U.S.C. 555). Foreign imports, exports, in-transit (commodities with origin and destination outside of U.S.) and foreign vessel movements data are collected by U.S. Customs and processed by the Bureau of the Census for the Corps under interagency agreements of 1946, 1997 and 1998. U.S. Bureau of the Census processes imports and exports and the U.S. Maritime Administration processes vessel movement data and merges these with Census import and export data and Corps in-transit data to create the historic U.S./Foreign Waterborne Transportation Statistics per OMB's 28 September 1998 directive. Archived statistical reports are available from 1915 to present.

(2) NDC is the responsible agency for compiling the Federal data and disseminating both foreign and domestic waterborne statistics for all U.S. waterborne transportation from water origin to water

destination and for each dock, waterway, channel and harbor in the U.S. NDC may assess a civil penalty to domestic operators of \$2,500 per reporting violation (i.e., failure of a vessel operating company to report their waterborne commerce movements in a timely and accurate manner). Violators are also liable to a fine of \$5,000 and up to two months imprisonment. Additionally the Corps may refuse service at Corps locks to such violators. (ER 1130-2-520)

(3) Release of Data: Detailed data furnished by vessel operators and others will not be disclosed, except in compilation form which will prevent identification of specific vessel operators or operations. Corps policy on release is found in 33 CFR 209.320. Government employees are subject to the sanction in 18 U.S.C. 1905 for unauthorized disclosures. Penalties may include imprisonment for not more than one year, fine of not more than \$1,000 and removal from employment. Data released to other Corps, Federal, state and local government agencies, private companies, and public are done in accordance with the Freedom of Information Act (5 U.S.C. 552).

b. Lock Performance Monitoring System and Lock Characteristics. NDC compiles data for each Corps owned and/or operated lock. Included are a locks physical properties (length, depth over sill, width, type of gate, year opened, etc), its performance under various physical conditions (ice, fog, flood and accidents), and vessel traffic (lockage time, wait time, size of vessel, number of recreational vessels, etc). Cargo and passenger statistical data are obtained under the authority of 33 U.S.C. 554-555. Data should not be released if it identifies any individual vessel owner and related commerce. (ER 1130-2-520)

c. Port and Waterway Facilities. NDC inventories cargo handling, storage and transfer facilities at the nation's coastal, Great Lakes and inland ports and waterways. Data also include facility location, point of contact and identification of access roads and railroads. Current data are available electronically and in hard copy. Archived publications date to 1922. All data are in the public domain.

d. Dredging Statistics. NDC compiles data from each Corps office pertaining to Government and contract dredging. Data includes project, quantity, type of dredge, method of disposal, Government estimates, bidders, and winning bid. All data are in the public domain.

12-13. Navigation Regulations. Section 4 of the River and Harbor Act of 1894, as amended (33 U.S.C.), authorizes the Corps to publish regulations governing the use of navigable waters, except where authority is specifically delegated to another Federal agency. Regulations for specific waterways and for locks and dams are published in 33 CFR 207. Certain restricted areas are regulated in 33 CFR 334. The Coast Guard also regulates "restricted areas" in 33 CFR 165. The distinction between Corps and Coast Guard jurisdiction is outlined in the memorandum of understanding between the two agencies dated 7 May 1977 clarifying their respective responsibilities as a result of enactment of the Ports and Waterways Safety Act of 1972 (Public Law 92-340). Restricted areas for hazardous waters at dams and other Civil Works structures are defined in ER 1130-2-520.

12-14. Danger Zones. Section 1 of the Army Appropriation Act of 1919

(33 U.S.C. 3) authorizes the Corps to establish danger zones and regulate navigation in areas likely to be endangered by target practice or other military operations. Regulations for specific danger zones are published in 33 CFR 334. Danger zone regulations are generally enforced by the military commander of the affecting command.

12-15. Drift and Debris Removal. The term "drift" includes any buoyant material that could cause damage to a commercial or recreational vessel. The term "debris" includes any abandoned or dilapidated structure or any partially sunken vessel or other object that can reasonably be expected to collapse or otherwise enter navigable waters as drift. Action by the Corps in removing drift or debris from navigable waterways is generally limited to the removal and disposal from the authorized project limits and immediate adjacent waterway areas (where the material may be carried into the channel) in the interest of general navigation. Drift collection is not accomplished in the slips of piers and wharves. Material lying in the shallow areas outside of the channels or along the shore is not gathered.

a. Existing Corps Projects. Specific and limited local programs for continuing debris collection and disposal have been authorized by Congress for New York, Baltimore, and Norfolk Harbors; Potomac and Anacostia Rivers in the Washington, D.C. Metropolitan area; and San Francisco Harbor and Bay, California. These authorizations are on an individual basis, and the work is carried out as authorized at each locality as a separate, distinct project.

b. General Project Authorization. Section 202 of WRDA 1976 (Public Law 94-587) provides general authority for developing projects for the collection and removal of drift and debris from publicly maintained commercial boat harbors and from land and water areas immediately adjacent thereto. The Federal participation in the cost of any such project can be two-thirds of the cost of the project. Non-Federal interests are required to recover the full cost of drift or debris removal from any identified owner of the source of drift or debris and repair potential sources so that they no longer create a potential source of drift or debris. Non-Federal interests must also provide all needed land, easements and rights-of-way; hold and save the United States free from damages which may result from the sponsor's performance of, or failure to perform, any of its required responsibilities, and regulate the project environs to prevent creation of future sources of drift. Although WRDA 1976 provides general authority for development of drift and debris removal projects, Department of the Army does not currently support authorization of, or budgeting for such projects.

12-16. Wreck Removal. Removal of sunken vessels, or other similar obstructions is governed by Sections 15, 19, and 20 of the River and Harbor Act of 1899, as amended. Primary responsibility for removal belongs to the owner, operator, or lessee. If the obstruction is a hazard to navigation and removal is not undertaken promptly and diligently, the Corps may obtain a court judgment requiring removal, or remove the wreck and seek reimbursement for the full cost of removal and disposal. Determinations of hazard to navigation and Federal marking/removal actions are coordinated with the Coast Guard in accordance with the related memorandum of agreement between the two agencies dated 16 October 1985. Removal and procedures are outlined in 33 CFR 245. (ER 1130-2-520)

12-17. Charts, Publications and Notices. The Corps publishes navigation charts for the inland waterways, and various publications containing navigational information and Federal regulations. Public Law 85-480 authorizes publication and sale generally, and requires that charges to the public for copies cover the cost of printing. (ER 1130-2-520)

12-18. Channel Condition Surveys. Every active waterway and harbor project will be surveyed a minimum of once per year to determine the condition of the channel used by navigation traffic. More frequent surveys may be made if justified by rapid shoaling rates. District and division commanders will then take necessary action to perform maintenance dredging to the appropriate project depth based on a valid economic analysis. (ER 1130-2-520)

12-19. Project Dimensions.

a. Authorized Dimensions. The dimensions of proposed features of improvement are set forth in preauthorization planning reports and, when project authorization is referenced to such reports, those dimensions constitute limitations with respect to the authorized works. This includes depths, widths and lengths of channels, harbor maneuvering areas and anchorages, lock sizes, horizontal and vertical bridge clearances and lengths of breakwaters. Unless otherwise provided in the project authorization, channel depths specified will be construed as actual dredging limits (exclusive of overdepth dredging) and not as the draft limit of vessels to be accommodated. In planning for initial development of authorized channels, channel widths specified shall (in accordance with Section 5 of the 1915 River and Harbor Act) be understood to admit of such increases at the entrances, bends, sidings and turning places as necessary to allow for the free movement of vessels. (ER 1130-2-520)

b. Dimensions Maintained. Full authorized project dimensions are maintained for Federal navigation projects where feasible and justified. To avoid frequent redredging in order to maintain full project depths, advance maintenance dredging is performed in critical, fast shoaling areas to the extent that it would result in the least overall cost. Such additional depth dredging is exclusive of and beyond the allowable overdepth included to compensate for dredging inaccuracies. In some waterways and harbors, the current needs of navigation can be met by dredging the project channel or basin to less than the authorized depth and/or width. If a temporary reduction in width from that authorized is acceptable, removal of moderate shoaling along channel lines is deferred until essential dredging in the channel is undertaken. Only where known progressive shoaling along channel lines is unduly restrictive to navigation will its removal be undertaken prior to the normal scheduling of maintenance dredging. (ER 1130-2-520)

12-20. Dredged Material Disposal. In planning new navigation projects prior to WRDA 1996 (on or before 12 October 1996), the policy was to require non-Federal interests to provide without cost to the United States all suitable areas required for initial and subsequent disposal of dredged material and all necessary retaining dikes, bulkheads and embankments therefor, or the costs of such retaining works. Subsequent to WRDA 1996 (after 12 October 1996), land-based and aquatic dredged material disposal facilities (DMDF) associated with the construction and O&M of all Federal navigation harbors and



inland harbors (but not the inland navigation system including the Atlantic Intracoastal Waterway and the Gulf Intracoastal Waterway) are considered to be general navigation features (GNF) of a project and subject to cost sharing (for both construction and O&M) in accordance with procedures set forth in Section 101 of WRDA 1986.

a. Maintenance Dredging Provisions of the Clean Water Act (CWA) of 1977. Maintenance dredging efforts of the Corps are governed by the environmental compliance requirements and procedures set forth in 33 CFR 335-338. Section 404(t) of the CWA authorizes any state to regulate, in accordance with its laws, the discharge of dredged material in any portion of the navigable waters within the jurisdiction of the state that results from maintenance dredging involving Corps of Engineers navigation projects. District commanders obtain state water quality certification, and a permit for disposal of maintenance dredged material required by Section 404(t) unless the state elects to waive these requirements. In cases where the project authorization requires a local sponsor to provide disposal areas and state or Federal requirements call for upland disposal, disposal areas must be made available by the sponsor before dredging proceeds. On projects where there are no local sponsor requirements to provide disposal areas, and state requirements call for upland disposal and Federal requirements do not, local or state assistance in providing suitable disposal areas is sought. If such assistance is not forthcoming, the increased project cost is evaluated with other national maintenance requirements to determine the relative priority of continuing maintenance dredging at that project. No maintenance dredging is performed unless disposal activities are in full compliance with state requirements unless a waiver from those requirements is obtained pursuant to Section 404(t) and Section 511(a). Restrictions on ocean dumping have been imposed by the Marine Protection, Research and Sanctuaries Act (MPRSA) of 1972 (see subparagraph c, following).

b. Land Creation or Enhancement at Inland Harbors. Federal participation in inland waterway harbor improvements under the Civil Works program is not warranted and shall not be recommended when (1) resale or lease of lands used for disposal of excavated material can recover the cost of the improvements or (2) the acquisition of land outside the navigation servitude is necessary for construction of the improvements and would permit local interest to control access to the project. The latter case is assumed to exist where the proposed improvement consists of a new channel cut into fast land.

c. Land Creation at Harbors (Other Than Inland Harbors). Formulation and cost sharing of harbor projects that include land creation benefits must be in accordance with the following procedures.

(1) The NED Plan will be formulated using navigation benefits exclusively (Land creation will not be considered in the net benefit evaluation). Special cost sharing will be required for land creation benefits associated with this NED Plan in proportion to the magnitude of these benefits to the total benefits. The cost sharing formula by which this policy is to be applied is as follows:

(a) Assign LERR to non-Federal interests.

(b) Special non-Federal cost sharing equal to:

Land Creation Benefits for this plan X (GNF Costs)  
Total Benefits for this Plan

(c) Remaining GNF costs shared in accordance with Section 101 of WRDA 1996, as amended, as described in paragraph 12-6.c(1).

(d) Provide full credit for this Plan's LERR toward the 10 percent requirement of Section 101(a)(2), as described in paragraph 12-6.c(1).

(e) This computation establishes the maximum Federal share.

(2) Non-Federal requests for modification of the NED Plan formulated using navigation benefits may be allowed provided all additional implementation costs are non-Federal and the incremental navigation benefits equal or exceed the incremental O&M costs for the GNF. No additional cost sharing will be required for the land creation benefits associated with the project modifications beyond the NED Plan which are requested and paid for by non-Federal interests. The modified NED plan may be recommended for authorization, implementation, and maintenance. However, the recommendation should be worded so as to provide the authority to construct the project formulated for navigation only in the event the non-Federal sponsor later decides to forego the requested modification. The cost sharing formula by which this policy is to be applied is as follows:

(a) The non-Federal share shall be the non-Federal costs determined in paragraph c.(1)(a) above plus 100 percent of the difference between the NED Plan and the cost of the requested modified plan; or all costs not assigned to the Federal Government under paragraph c.(2)(b) below, whichever is greater.

(b) The Federal share shall be the Federal costs determined in paragraph c.(1)(a) above; or, when the modified NED Plan results in a cost for GNF that is less than the cost for GNF for the NED Plan, the Federal share of costs will be limited to the Federal percentage of the total GNF derived in paragraph c.(1) above times the cost of the GNF for the modified NED Plan.

(3) Reports proposing the creation of lands to be utilized for development of port facilities required to accommodate projected traffic shall require local interests to retain fee ownership of those lands, and to regulate the use, growth and development on such lands to those industries whose activities are dependent upon water transportation.

d. Restriction on Ocean Disposal. Section 103 of the MPRSA of 1972 (Public Law 92-532) states that, subject to certain provisions, and after notification to the Administrator of the Environmental Protection Agency, the Secretary of the Army "may issue permits, after notice and opportunity for public hearings, for the transportation of dredged material for the purpose of dumping it into ocean waters, where the Secretary determines that the dumping will not unreasonably degrade or endanger human health, welfare, or amenities, or the marine environment, ecological systems, or economic potentialities." Ocean disposal in connection with Federal dredging projects may be authorized by the Secretary using the same procedure required for issuance of permits (see paragraph 22-2.f).

e. Ecosystem Restoration Projects. Section 204 of WRDA 1992 (Public Law 102-580) authorizes the Secretary of the Army to carry out projects for the protection, restoration, and creation of aquatic and ecologically related habitats, including wetlands in connection with dredging for construction, operation, or maintenance of an authorized Federal navigation project. A non-Federal sponsor must agree to provide 25 percent of the cost associated with the construction, including provision of all lands, easements, rights-of-way, and necessary relocations, and 100 percent of the operation, maintenance, replacement, and rehabilitation costs.

12-21. Placement of Dredged Materials on Beaches. Section 145 of WRDA 1976 (Public Law 94-587) as amended by Section 933 of WRDA 1986 (Public Law 99-662) authorizes the Secretary of the Army, if requested by a state, to "place on the beaches of such state beach-quality sand which has been dredged in constructing or maintaining navigation inlets and channels adjacent to such beaches if the Secretary deems such action to be in the public interest and upon payment by such state of 50 percent of the increased cost thereof above the cost for alternative methods of disposing of such sand." The Corps will share the additional costs with the state (50-50) only if the beneficial NED outputs from placing the dredged material on a beach satisfactorily meet economic justification and other priority criteria generally applicable to all proposed Civil Works "new work" outlays. If those criteria are not met and the state still desires that the material be placed on state beaches, 100 percent of the additional costs involved must be provided by non-Federal interests. When the initial state request is received, a study, funded from available appropriations for the navigation project to be dredged, must be performed to establish the merit of so disposing of the dredged material and whether 50 percent of the additional costs should be Federally funded. If beach disposal is ultimately agreed to, the study costs will be considered to be part of the additional cost for such disposal. If 50 percent of the costs are to be Federally funded, the remainder of such Federal share will be funded from appropriations for the navigation project. The amounts attributable to the additional costs for beach disposal will, however, be recorded separately from the other navigation project costs--since navigation benefits do not justify them. If the state requests, the Corps may enter into an agreement with a political subdivision of the state to place the sand on the beaches of the political subdivision, with the political subdivision responsible for the additional costs of placement. Consideration must be given to the schedule of a state, or political subdivision of a state, for providing its share of funds for placing sand on its beaches, and, to the maximum extent practicable, accommodation of such schedule.

12-22. Advanced Maintenance Dredging. For the purpose of maintaining projects, division commanders may approve advanced maintenance dredging within authorized project limits to avoid frequent redredging throughout the year. Such advanced maintenance (dredging to depths or widths in excess of authorized project dimensions) can be performed in critical, fast shoaling areas to the extent it will result in the least overall cost. Project files must contain the written justification and approvals for advanced maintenance. Such additional dredging is exclusive of the allowable overdepth provided to compensate for dredging inaccuracies. Advance maintenance dredging shall not be used to provide channel dimensions for vessels that exceed design limitations of the project. Overdepth dredging may also be provided and maintained specifically for military requirements, as

authorized by Section 117 of the River and Harbor Act of 1968 (33 U.S.C. 562a). (ER 1130-2-520)

12-23. Lock and Dam Replacements. Section 4 of the River and Harbor Act approved 5 July 1884 as amended by Section 6 of the River and Harbor Act approved 3 March 1909 provides in part that whenever, in the judgement of the Secretary of the Army, the condition of any of the navigation works of the United States is such that its entire reconstruction is absolutely essential to its efficient and economical maintenance and operation, the reconstruction thereof may include such modifications in plan and location as may be necessary to provide adequate facilities for existing navigation: provided, that the modifications are necessary to make the reconstructed work conform to similar works previously authorized by Congress and forming a part of the same improvement, and that such modifications shall be considered and approved by the Chief of Engineers before the work of reconstruction is commenced. Use of the 1909 authority will be for essential repairs, rehabilitation, replacement, or reconstruction of existing navigation structures which are required for continued use of the project for authorized purposes and which do not change the authorized project in scope, scale, or location. Also included under the 1909 authority are measures to improve operational efficiency such as modernization of operating equipment. The 1909 Act authority will not be used where it is determined that the necessary reconstruction work includes improvements, additions, or betterments which constitute a change in project purpose, size, location, or increased capacity beyond that obtainable from improved operational efficiency. In recent years use of the 1909 Act authority has been rare. Extensive repair work on existing projects has been accomplished as major rehabilitation. Section 205 of WRDA 1992 (Public Law 102-580) addresses the funding of major rehabilitation modifications to enhance operating efficiency beyond the original project design.

12-24. Correction of Federal Navigation Project Induced Shore Damage. Section 111 of the River and Harbor Act of 1968 (Public Law 90-483) as amended by Section 940 of WRDA 1986 (Public Law 99-662) provides authority to "...investigate, study, plan and implement structural and nonstructural measures for the prevention or mitigation of shore damages attributable to Federal navigation works." This is subject to requirement that a non-Federal public body agree to operate and maintain the measures and, in the case of real property acquired in conjunction with nonstructural measures, to operate and maintain the property for public purposes in accordance with regulations prescribed by the Corps. The costs for implementing measures under this authority will be shared by non-Federal interests in the same proportion as the costs for the project causing the shore damage were so shared. (In the case of a navigation project comprised of a number of authorized modifications, costs for Section 111 measures will be cost shared in accordance with the cost sharing for the specific modification or modifications to which the cause of shore damage can be traced.) When adopted, the plan for Section 111 measures is considered to constitute a modification to the related navigation project. When the Federal share of the construction costs on this basis for suitable mitigation measures would exceed \$2 million (based on bids, or Corps estimates prior to obtaining bids) the measures may not be undertaken pursuant to the Section 111 authority; specific congressional authorization is required in such circumstances. The Section 111 authority applies to both public and privately owned shores located along the coastal and Great Lakes shorelines damaged by

Federal navigation projects. Exercise of the Section 111 authority to provide mitigation measures with the authorized Federal cost sharing is not mandatory. Normally, the degree of the mitigation is the reduction of erosion or accretion to the level which would prevail without the influence of navigation works at the time navigation works were accepted as a Federal responsibility. It is not intended that shorelines be restored to historic dimensions, but only to lessen the existing shore damage or prevent subsequent damages by action based on sound engineering and economic principles when equitable and in the public interest. This authority is not utilized to construct, maintain, modify or change an authorized shore protection project or an authorized shore damage mitigation element of a navigation project, or for river bank erosion or vessel-generated wave wash damage. (ER 1105-2-100)

12-25. Federal Project Development by Others. WRDA 1986 (Public Law 99-662) includes special provisions under which non-Federal interests may undertake work on a navigation project, both study and construction, for which they may obtain either credit (study), reimbursement (construction), or Federal assumption of O&M.

a. Study. Section 203 of WRDA 1986 permits a non-Federal interest to undertake a study of a harbor or inland harbor improvement for the purpose of getting the work authorized by Congress. The study is submitted to the Secretary of the Army, who transmits it to Congress, with recommendations, within 180 days of receipt from the non-Federal interests. If the proposed work becomes an authorized Federal project, a portion of the non-Federal study costs (the equivalent of the Federal share of study costs had the study been accomplished by the Corps) will be credited against the local share of the costs of construction, as the project is built. (ER 1165-2-122)

b. Construction. The authority for non-Federal construction of harbor and inland harbor projects by non-Federal interests is contained in Section 204 of WRDA 1986, as amended, in Sections 204(a) through (g).

(1) Section 204(a). This subsection authorizes a non-Federal interest to undertake navigational improvements in harbors or inland harbors. Projects constructed under this subsection are not considered to be Federal projects unless the Federal Government later assumes responsibility for O&M after project construction is completed pursuant to subsection 204(f) (See paragraph 1.f.). For any project constructed in accordance with subsection 204(a), the non-Federal interest is fully responsible for all construction costs incurred and for obtaining all necessary permits. (ER 1165-2-124)

(2) Section 204(b). This subsection allows the non-Federal interest to contract with the Corps of Engineers to have the Corps undertake studies and engineering for projects which the non-Federal interest will construct under subsection 204(a). The studies, conducted at the expense of the non-Federal interest, can be used (under subsection 204(d), in addressing the requirements for obtaining the appropriate permits required under the Secretary's authority as well as support for a request for Federal O&M under subsection 204(f). (ER 1165-2-124)

(3) Section 204(c). This permits the Corps to turn over to non-Federal interests Corps studies initiated before 17 November 1986

(either finished or unfinished), so that the study information may be used in the permitting process. If the transferred Corps study is complete, it can be used (under subsection 204(d) in addressing the requirements for obtaining the appropriate permits required under the Secretary's authority as well as support for a request for Federal O&M under subsection 204(g). (ER 1165-2-124)

(4) Section 204(d). This subsection states that if the Corps of Engineers has completed a study and engineering for an improvement to a harbor, including the filing of a Final Environmental Impact Statement, and the non-Federal interest has requested and received such study and engineering from the Secretary pursuant to subsection (b) or (c) of Section 204, the non-Federal interest is authorized to carry out the improvement. Any improvement implemented in accordance with subsection (d) of Section 204 shall be deemed to satisfy the requirements for obtaining the appropriate permits required under the Secretary's authority, subject to a finding that (1) the applicable regulatory criteria and procedures have been satisfied and that (2) regulatory requirements and environmental conditions have not changed since the studies were completed. This provision only applies to satisfying the permits under the Secretary's authority. (ER 1165-2-124)

(5) Section 204(e). Section 204(e)(Reimbursement) of WRDA 1986 permits a non-Federal interest to construct an authorized Federal project improvement with subsequent reimbursement for the Federal share of project costs. In order to qualify for reimbursement, the proposed work must be construction of a project specifically authorized by Congress or be a separable element of such a project (Section 204(e)(Reimbursement) is not applicable to projects undertaken under the continuing authority program). It must be primarily for the benefit of commercial navigation and must currently satisfy the same economic and environmental criteria that would be applied for Federal implementation. Since construction responsibility will rest with the non-Federal interests, all Federal and non-Federal permits must be obtained. The Corps must approve the plans of construction and monitor the project as it is being built. Only work started after an agreement is reached between ASA(CW) and the non-Federal interests is eligible for reimbursement. No reimbursement shall made unless and until the ASA(CW) has certified that the work for which reimbursement is requested is complete and has been performed in accordance with applicable permits and the approved plans. However, ASA(CW) certification can be made upon completion of physical construction, even if there are claims outstanding. The amount eligible for reimbursement will be limited to the cost of completed construction, including all settled claims at the time of certification. Unsettled claims would be a non-Federal responsibility. (ER 1165-2-120)

(6) Section 204(f). This subsection allows the Secretary to approve as many as two proposals whereby a non-Federal interest would undertake all or part of an authorized Federal project as the agent of the Secretary by utilizing its own personnel or by procuring outside services, so long as the costs of doing so will not exceed the cost of the Secretary undertaking the project. (ER 1165-2-124)

c. Construction Authority Applicable to Navigation. The Corps regulations implementing both Section 204(e)(Reimbursement) of WRDA 1986 and Section 215 of the Flood Control Act of 1968, which provides

general authority for credit or reimbursement of limited non-Federal construction work on congressionally authorized water resources development projects of all kinds (paragraph 8-6), have much in common. As it is the most recent legislation, and the one that specifically makes provision for non-Federal construction of a complete or separable element of a Federal navigation project, the Section 204(e) (Reimbursement) authority is considered the one applicable to non-Federal navigation works of such scope. Hence, for any item of proposed non-Federal construction that would constitute complete construction of a Federal navigation project or a separable element thereof, provision for credit or reimbursement of non-Federal interests for the Federal share of project costs will generally be considered only under the Section 204(e)(Reimbursement) authority. For non-Federal navigation works of similar scope undertaken pursuant to Section 215, agreements will ordinarily provide that only credit against the non-Federal share of future project costs will be afforded.

d. Federal Assumption of O&M. Section 204(e)(O&M) of WRDA 1986 gives the Secretary of the Army responsibility for O&M of any project constructed by non-Federal interests under Section 204(a), Section 204(d), or Section 204(e)(Reimbursement) of WRDA 86, provided that before construction, the Secretary determines that the proposed work is economically justified and environmentally acceptable. The Secretary must also certify that the work has been completed in accordance with applicable permits and acceptable design standards. Further guidance on Section 204(e)(O&M) is provided in ER 1165-2-124. Federal O&M responsibilities for authorized Federal projects subject to Section 204(e)(Reimbursement) are addressed in ER 1165-2-120.

12-26. Navigation versus Hurricane and Storm Damage Reduction (HSDR). Measures which contribute to the increase in net income of commercial navigation activities or result in a decrease in commercial transportation costs will be evaluated and cost shared as navigation (harbor) measures. This includes measures to prevent wave induced damages to commercial vessels while berthed at docks, piers, and slips, and that incidentally prevent wave induced damages to the commercial docks, piers, and slips. Measures to prevent wave induced damages to non-commercial (recreational) vessels while berthed at docks, piers, or slips and measures to prevent wave induced damages to docks, piers, slips and other shoreline facilities, are to be evaluated and cost shared under the HSDR provisions of Sections 103(c)(5) and 103(j) of WRDA 1986. Measures to provide for safe and efficient movement of commercial and recreational vessels into and within a harbor and measures to prevent loss and damage to vessels in transit will continue to be evaluated and cost shared as navigation (harbor) measures. This policy does not provide any Federal interest in the construction of docks, terminal or transfer facilities, or berthing areas.

a. Application of Policy for Harbors. The above policy applies to existing berthed vessels and shoreline facilities and to vessels and facilities that would exist in the future without-project condition at the project or an alternate location. For vessels that would not be present at any location in the without-project condition, but would be present in the future as a result of the project, benefits are only evaluated as commercial or recreational navigation benefits, as appropriate.

b. Application of Policy for Multiple Purpose Facilities.

Where measures are formulated to serve both HSDR and navigation, an allocation of multiple purpose joint costs must be made and the joint costs shared in accordance with the purpose to which they are allocated along with any specific costs for features which serve only one purpose. This cost allocation must include operation, maintenance, repair, replacement, and rehabilitation responsibility under the HSDR purpose. No cost allocation is required where a measure is formulated to serve a single purpose but results in incidental benefits, provided that the single purpose feature maximizes net benefits. For example, a breakwater formulated to provide HSDR, which is part of a NED plan, may produce incidental navigation benefits but would be cost shared as an HSDR feature. Conversely, a breakwater formulated to provide reductions in transportation costs and/or increased net income to commercial navigation activities may produce incidental HSDR benefits but would be cost shared as a navigation feature.